María

Serrano ruber

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# Profile\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PhD Researcher in bioarchaeology of disability, with particular interests in understanding the lived experiences and perceptions of disability, impairment, and chronic illness in antiquity. I analyse archaeological human skeletal remains to answer questions about identity and lived experiences. I am fluent in multiple languages, have co-authored 6 published papers, and have both lab-based and fieldwork experience.

# Education \_

## 2023 - Present PhD Bioarchaeology of Disability – University College Dublin, Ireland

Thesis: Examining the Life Course of Disabled and Chronically Ill Individuals and their Access to Healthcare in Roman Britain.

Key words: Bioarchaeology, Paleopathology, Disability in Antiquity, Life Course, Index of care.

## 2018 - 2019

## MSc Human Osteoarchaeology – Leiden University, The Netherlands

Second specialisation in the European Palaeolithic

Thesis: The Dutch Distemper: Applying a New Diagnostic Method for Scurvy on a 19th Century Dutch Rural Population.

Key words: Osteology, Paleopathology, Metabolic Disease, Famine and Food

shortages.

## 2015 - 2018

## BSc Archaeology – University of Reading, United Kingdom

Dissertation: Investigating Birth Seasonality in Roman Exeter through the Stable Isotope Analysis of Sheep/Goat Enamel.

Key words: Dental Sequential Isotope analysis, Oxygen and Carbon Isotopes,

Animal Diet, Husbandry Practices, Social Change.

# Archaeological Experience\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## 2021 - 2023

## Laboratory Technician for the Tobacco Health and History Project at Leicester University Leicester, U.K.2019 - 2020

## Volunteer Lab Assistant at Leiden Laboratory for Human OsteoarchaeologyLeiden, The Netherlands2019

## Volunteer Field Archaeologist at the Eusebiuskerk Excavation with ADC Archeologen Arnhem, The Netherlands2018

## Laboratory Intern at Leiden Laboratory for Human Osteoarchaeology Leiden, The Netherlands2018

## Environmental Science Trainee at Silchester Roman Town with Reading University Silchester, U.K.

## 2017

## Environmental Science Placement at Vale of Pewsey Archaeological Field School with Reading University - Wiltshire, U.K.2016

## Student Field Archaeologist at Vale of Pewsey Archaeological Field School with Reading University - Wiltshire, U.K.

**Publications\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Badillo-Sanchez, D., Davies-Barrett, A.M., **Serrano Ruber, M.**, Jones, D. & S.A. Inskip, **2024**. Archaeometabolomics characterizes phenotypic differences in human cortical bone at a molecular level relating to tobacco use, Science Advances, Volume 10, 40.
Available at: <https://doi.org/10.1126/sciadv.adn9317>

Badillo-Sanchez, D., **Serrano Ruber, M.**, Davies-Barrett, A.M., Jones, D.J.L., Hansen, M. & S.A. Inskip, **2023**. Metabolomics in Archaeological Science: A Review of their Advances and Present Requirements, Science Advances, Volume 9, 32.
Available at: <https://doi.org/10.1126/sciadv.adh0485>

Badillo-Sanchez, D., **Serrano Ruber, M.**, Davies-Barrett, A.M., Jones, D.J.L. & S.A. Inskip, **2023**. Botanical collections as an opportunity to explore nature through the time: An untargeted metabolomic study in historical and modern Nicotiana leaves, Journal of Archaeological Science, Volume 153, 105769.
Available at: <https://doi.org/10.1016/j.jas.2023.105769>.

Inskip, S.A., Zachary, L., **Serrano Ruber, M.** & M. Hoogland, **2023**. Pipe smoking and oral health in males from The Netherlands during the 18th–19th century. Post-Medieval Archaeology, 57(1), 94-107.
Available at: <https://doi.org/10.1080/00794236.2022.2156834>

Badillo-Sanchez, D., **Serrano Ruber, M.**, Davies-Barrett, A.M., Sandhu, J.K., Donald J. L. Jones, D.J.L., Hansen, M. & S.A. Inskip, **2023**. Examination of human osteoarchaeological remains as a feasible source of polar and apolar metabolites to study past conditions. Sci Rep 13, 696.
Available at: <https://doi.org/10.1038/s41598-023-27401-0>

Velsko, I.M., Semerau, L., Inskip S.A., García-Collado, M.I., **Serrano Ruber, M.**, Benítez de Lugo, L., Molero García, J.M., Gallego Valle, D., Peña Ruiz, A.C., Salazar García, J.M., Hoogland, M.P. & C. Warriner, **2022**. Ancient dental calculus preserves signatures of biofilm succession and inter-individual variation dependent of dental pathology. PNAS Nexus, Volume 1, 4, pgac148.
Available at: <https://doi.org/10.1093/pnasnexus/pgac148>.

**Conference Participation\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Posters**:

**2024**

**EAA Annual Meeting,** Rome, Italy
Detecting Disability: An Interdisciplinary Osteoarchaeological Pilot Study Applying the Index of Care to a Romano-British Population

**Irish Archaeology Association Conference,** Limerick, Ireland
Detecting Disability: A Plan for an Interdisciplinary Osteoarchaeological Pilot Study Applying the Index of Care to a Romano-British Population

**2021**
**BABAO Conference,** Teeside, U.K.

The Dutch Distemper: Investigating the effects of the Dutch potato blight on the prevalence of scurvy in a 19thC rural Dutch population.

**Administration and organisation:**

**2024 – 2025**

**Interdisciplinary Early Career Seminar for Medieval Studies,** UCDSteering Committee and presenter (see below)

**2022**

**Intersectional Bodies Symposium,** University of LeicesterAdministration and social media management **Tobacco Health and History Seminar,** University of LeicesterAdministration, social media management, and presenter (see below). **Engineering the Past to Build a Resilient Future,** University of LeicesterSocial Media management – with prize for Best Tweet.

**2021**

**Tobacco Through Time Conference,**  University of LeicesterAdministration and co-organisation.

**Teaching Experience\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Human Osteoarchaeology ARCH31010**, UCD
One lecture and one lab session on lower limb skeletal anatomy, as well as assisting during laboratory sessions for rest of the semester.

**Departmental Talks\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2024**

**“So, what do you actually do?” An Example of Skeletal Analysis of Disability**

PhD Research Day, UCD

**Deciphering Disability Narratives in Roman Britain**
Interdisciplinary Early Career Seminar for Medieval Studies, UCD

**2023**

**Examining the Life Course of Disabled and Chronically Ill Individuals and their Access to Healthcare in Roman Britain**

PhD Research Day, UCD

**2022**

**Identifying pipe notches using scanning-electron microscopy**
Tobacco Health and History Seminar, University of Leicester

**Departmental Service\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2024 - present**

**PhD Representative**School of Archaeology, UCD

**Research Committee Member**School of Archaeology, UCD

**Public Outreach\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2024
Chester House Estate Roman Fest**

Stand: Written in Bone: Using Skeletons to Understand the Human Past
Wellingborough, U.K.

**2022
Great Exhibition Road Festival**

Stand: How old am I really? Ageing skeletal remains in archaeology.
Leicester, U.K.

**Professional Memberships\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

European Association of Archaeologists, Irish Archaeology Association, Disabled Archaeologists Network, Cripantiquity.

# Additional Skills\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Mechanical Proficiencies

Scanning Electron Microscopy (BSD, C2D);
Light and metallographic microscopy;
Radiography and microCT scanners;
Dremel drilling tool;
Chemical wet lab equipment, including micro-pipettes, centrifuges, speed vacuums, freeze-dryers, and fume hoods.

## IT Proficiencies

Microsoft Office package, including Word, PowerPoint, Excel, and Access;
Macintosh programs, including Keynote, Pages, and iMovie;
Integrated Archaeological Database;
IBM SPSS Statistics Program;
RStudio statistics software;
Zotero referencing software;
CAT programs, including SmartCat Translation Software;
ELAN Linguistic Annotator Software;
Online communication programs, including Teams, Zoom, and Skype.
Social Media applications, including Facebook, Twitter, and Instagram.

## Languages

English, Spanish, an Dutch: Native / Bilingual proficiency;

Friench: B2 or intermediate proficiency;

Ancient Greek: Elementary proficiency.

**Courses and Professional Development\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2024 - present**

**Dental Calculus under the Microscope: Investigating Environment and Crafts**.

Training under Dr. Anita Radini, learning how to handle, sample, clean, and analyse human and animal dental calculus for microscopy analysis.

University College Dublin

**2022**

**IPERION 1st HS Academy Training Camp**

Week-long hands-on experience with FIXLAB techniques applied to paleontological and paleoanthropological heritage- including dating techniques (Electron Spin Resonance, Paleomagnetism, U Series, etc.) and materials categorisation methodologies (nano/micro computed tomography).
CENIEH (National Research Centre on Human Evolution), Burgos, Spain.

**2020**

**Assessing Puberty and Adolescent Growth in Human Skeletal Remains**

Three-day online workshop hosted by Prof. Mary Lewis and the University of Reading, United Kingdom.

**Evolution Today: Evolutionary Processes and Biodiversity –**

Online course provided by Leiden University and Naturalis Biodiversity Center, The Netherlands.
Coursera.org

**Griego Clásico: nombres, verbos, mitología, y filosofía**. – *Ancient Greek: Nouns, Verbs, Mythology, and Philosophy.*

Online course provided by Universidad Autónoma de Madrid, Spain
edX.org

**References\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Available upon request.